

Masataka MINAKAWA
Q97476
PRELIMINARY AMENDMENT

AMENDMENTS TO THE CLAIMS

This listing of claims will replace all prior versions and listings of claims in the application:

LISTING OF CLAIMS:

- [1] (original) A method for pivotably driving a carriage, comprising the steps of:
engaging a carriage positioned on the ground side at a curved portion of an oval-shaped
endless moving path consisting of a pair of inner and outer endless rails with a carrier driven
along the curved portion when the carriage is driven under a guide of the rails; and
towing the carriage over the entire length of the curved portion by the carrier.
- [2] (original) A method for pivotably driving a carriage according to claim 1, wherein the
carrier is reciprocally moved along the same path by the action of traveling of a roller chain.
- [3] (currently amended) A method for pivotably driving a carriage according to claim 1 or 2,
wherein the carriage is positioned at the ground side by fitting a positioning pin displaced
forwardly and backwardly from the ground side onto the carriage while the carriage is engaged
with the carrier by fitting an engagement pin displaced forwardly and backwardly from the
carriage side onto the carrier.
- [4] (currently amended) A method for pivotably driving a carriage according to ~~any one of~~
~~claims 1-3~~ claim 1, wherein the carriage is engaged with the carrier in a state where the carriage
is positioned and locked on the ground side, then the carriage is unlocked and towed over the
entire length of the curved portion by the carrier, and subsequently the carriage is again
positioned and locked on the ground side as well as is disengaged from the carrier.

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[5] (currently amended) A method for pivotably driving a carriage according to ~~any one of claims 1-4~~ claim 1, wherein the carrier which is moved outward while towing the carriage is returned to the original position.

[6] (currently amended) A method for pivotably driving a carriage according to ~~any one of claims 1-5~~ claim 1, wherein compressed air is supplied to an engagement pin-actuating cylinder of the carriage before the engagement/disengagement of the carriage with the carrier.

[7] (currently amended) A device for implementing a method for pivotably driving a carriage according to ~~any one of claims 1-6~~ claim 1, wherein an endless roller chain which is traveled along the curved portion over its entire length in the horizontal plane is disposed with the roller axis being aligned with the vertical line, and one or more carrier which can engage with/disengage from the carriage is mounted on the roller chain.

[8] (original) A device for pivotably driving a carriage according to claim 7, wherein a weight-supporting roll is mounted on the roller chain at every given pitch of its chain link.

[9] (currently amended) A device for pivotably driving a carriage according to claim 7-~~or 8~~, wherein a wear resistance resin material for contacting with the roller is arranged on a chain guide at the position which locates at least inside of the curvature of the roller chain extending along the curved portion and contacts with the chain.

[10] (currently amended) A device for pivotably driving a carriage according to ~~any one of claims 7-9~~ claim 7, wherein the roller chain extends between the pair of inner and outer rails and a driving train for the roller chain is arranged between these rails.

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[11] (currently amended) A device for pivotably driving a carriage according to ~~any one of~~ ~~claims 7-10~~ claim 7, wherein positioning pins which is displaced forwardly and backwardly from the ground side to engage with and disengage from the carriage as well as means for supplying compressed air which is connected to and disconnected from an engagement pin-actuating cylinder of the carriage are arranged on each of the positions backside of the entrance and front of the exit of the curved portion with respect to the traveling direction of the carriage.

[12] (currently amended) A tire building system using a device for pivotably driving a carriage according to ~~any one of~~ ~~claims 7-11~~ claim 7, comprising carriages on which a tire building drum is positioned and placed, a concurrent driving means which simultaneously and intermittently transmits each of a plurality of carriages aligned on a straight portion of an oval-shaped endless moving path over a given distance, and workstations which perform given works on the tire building drum and are arranged at the positions respectively corresponding to the stopping positions of the carriages.